BEST AVAILABLE COPY

## REMARKS

These remarks and the accompanying amendments are responsive to the Office Action dated July 26, 2005 (hereinafter referred to as the "Office Action"), having a shortened statutory period for response that expires today, October 26, 2005. At the time of the last examination, Claims 57, 58, 61, 62, 65-80 and 83-88 were pending. The Office Action rejects all of these claims and objects to a few of them. By this response, Claims 57, 58, 61, 62, 66-70 and 85 are cancelled, and new claims 89-104 are added. Accordingly, upon entry of this amendment, Claims 65, 71-80, 83, 84, and 86-104 will be pending for further consideration.

Section 1 of the Office Action objects to Claims 57, 58, 61 and 62 due to some informalities. The objection is rendered moot by the cancellation of these claims. However, New Claims 89-97 are presented herein, which have many similar features to prior Claims 57, 58, 61 and 62. It is respectfully submitted that these new claims do not have the same informalities. In particular, the expression "not octet-inserted and not bit-inserted" is used rather than the objected to expression "not octet-inserted or not bit-inserted" throughout all of the relevant claims presented herein.

Beginning first with section 4 of the Office Action, the Office Action rejects 65-67 under 35 U.S.C. 103(a) as being unpatentable over United States patent number 5,666,362 issued to Chen (hereinafter referred to as "Chen"). The rejection is moot with respect to cancelled Claims 66 and 67, but remains with respect to Claim 65.

Claim 65 recites a communication method in a third communication apparatus (e.g. DCE 4 of Figure 2) which is directly connected to a first communication apparatus (e.g. DTE 2) and can communicate with a second communication apparatus (e.g. DTE 14) through a network (e.g. communication network 5 and PSTN 12). These amendments are supported, for example, at

BEST AVAILABLE COPY

page 37, lines 8-18 of the present application. However, this feature is not disclosed in Chen, nor would it be obvious to one of ordinary skill in the art to modify Chen to include this feature. Accordingly, Claim 65 is neither anticipated by nor rendered unpatentable over Chen. Claim 98 depends from Claim 65 and thus is not rendered unpatentable over Chen for at least these reasons. Accordingly, the 35 U.S.C. 103(a) rejection of section 4 of the Office Action should be withdrawn.

Regarding new Claim 102, Claim 102 recites a communication method in a third communication apparatus (e.g. gateway 10 of Figure 2) which can communicate with a first communication apparatus (e.g. DTE 14) through a first network and can communicate with a second communication apparatus (e.g. DTE 2) through a second network. Here, the first network is a telephone network (e.g. PSTN 12). This material is supported in the specification at, for example, page 37, line 26 to page 38, line 6. This feature likewise is not taught or suggested by Chen. Claim 99 depends from Claim 102, and is thus not unpatentable over Chen for at least these reasons.

Section 5 of the Office Action rejects Claims 68-70 under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (hereinafter "AAPA") in view of United States patent number 5,978,386 issued to Hamalainen et al. (hereinafter "Hamalainen"). This section asserts that Hamalainen discusses reducing data by discarding unwanted or unnecessary data in an intermediate node. Claims 68-70 are cancelled herein, thereby rendering this rejection moot.

However, some of the features formerly attributed to Claims 69 and 70 may be found in current new Claims 103 and 104. Accordingly, some of the comments in section 5 of the Office Action will be now discussed with respect to Claims 103 and 104.



PAGE 21/29 * RCVD AT 10/26/2005 7:42:01 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:8013281707 * DURATION (mm-ss):09-32

BEST AVAILABLE COPY

Claim 103 recites is a communication method in a third communication apparatus (e.g. DCE 4 of Figure 2) which is directly connected to a first communication apparatus (e.g. DTE 2) and can communicate with a second communication apparatus (e.g. DTE 14) through a network (e.g. communication network 5 and PSTN 12). Please see page 37, lines 19-25 of the specification of the present application for support. This feature is not disclosed, taught or suggested by Hamalainen, nor is it part of AAPA. Accordingly, Claim 103 is not rendered unpatentable over AAPA in view of Hamalainen. Claim 100 depends from Claim 103 and thus is not rendered unpatentable over the combination for at least these reasons.

Claim 104 recites a communication method in a third communication apparatus (e.g. gateway 10 of Figure 2) which can communicate with a first communication apparatus (e.g. DTE 14) through a first network and can communicate with a second communication apparatus (e.g. DTE 2) through a second network. Here, the first network is a telephone network (e.g. PSTN 12). Please see page 37, line 26 to page 38, line 6 of the specification of the present application for support. Once again, this feature is not disclosed, taught or suggested by Hamalainen. Neither is it part of AAPA. Accordingly, Claim 104 is likewise not rendered unpatentable over the combination. Claim 101 depends from Claim 104, and thus is not rendered unpatentable over the combination for at least the reasons provided for Claim 101.

Section 6 of the Office Action rejects Claims 71-76 and 86 under 35 U.S.C. 103(a) as being unpatentable over European patent application 933,898 to Hirono (hereinafter "Hirono"). Claim 71 recites a communication method in a third communication apparatus of a first node located between a first communication apparatus of the first node and a second communication apparatus of a second node. Here, the first communication apparatus and the second communication apparatus perform data communication based on PPP. The method



PAGE 22/29 * RCVD AT 10/26/2005 7:42:01 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:8013281707 * DURATION (mm-ss):09-32

BEST AVAILABLE COPY

intermediates a setting request packet from the second communication apparatus to the first communication apparatus, receives a setting rejection packet or a setting negation packet from the first communication apparatus, produces a setting request packet according to the setting rejection packet or the setting negation packet, and transmits the produced setting request packet to the first communication apparatus.

In the previous response, we asserted that although the communication control apparatus 10 of Hirono may intermediate communication, it does not produce a setting request packet according to the setting rejection packet or the setting negation packet. In the section 10 of the current office action, regarding claims 71-76 and 86, the examiner said that producing a "setting rejection" or "setting negation" packet would be obvious.

However, it seems that our assertion was misunderstood. That is, what we asserted is that Hirono does not disclose producing "setting request packet" according to the setting rejection packet or the setting negation packet, not that Hirono does not disclose producing "setting rejection" or "setting negation" packet.

Therefore, Claim 71 is not rendered unpatentable over Hirono. Further, as recited in claim 71, the first communication apparatus and the second communication apparatus perform data communication based on PPP. In Hirono, there is no description regarding PPP, thus further supporting the argument that Claim 71 is not rendered unpatentable over Hirono. Claims 72 and 73 and 86 (to the extent that it depends from Claim 71) depend from Claim 71, and thus Claim 72 and 73 and 86 (to the extent that it depends from Claim 71) are not rendered unpatentable over Hirono for at least the reasons provided for Claim 71.

Claim 74 recites a communication method in a third communication apparatus of a first node located between a first communication apparatus of the first node and a second



PAGE 23/29 * RCVD AT 10/26/2005 7:42:01 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:8013281707 * DURATION (mm-ss):09-32

BEST AVAILABLE COPY

communication apparatus of a second node. Here, the first communication apparatus and the second communication apparatus perform data communication based on PPP. The method intermediates a setting request packet from the first communication apparatus to the second communication apparatus, intermediates a notification of setting rejection or setting negation from the second communication apparatus to the first communication apparatus, receives a setting request packet from the first communication apparatus, and terminates the received setting request packet.

In the previous response, we asserted that if it is considered that the communication control apparatus 10 intermediates a setting request packet from the radio terminal 11 in Hirono, it is clear that the communication control apparatus 10 never terminates such packet. In section 10 of the Office Action, regarding claims 71-76 and 86, the examiner said that producing a "setting rejection" or "setting negation" packet would be obvious. However, as previously explained with respect to Claim 71, what we asserted is that Hirono does not disclose producing "setting request packet" according to the setting rejection packet or the setting negation packet, not that Hirono does not disclose producing "setting rejection" or "setting negation" packet.

Therefore, Claim 74 is not rendered unpatentable over Hirono. Further, as recited in Claim 74, the first communication apparatus and the second communication apparatus perform data communication based on PPP. In Hirono, there is no description regarding PPP, thus further supporting the argument that Claim 74 is not rendered unpatentable over Hirono. Claims 75 and 76 and 86 (to the extent that it depends from Claim 74) depend from Claim 74, and thus Claim 75 and 76 and 86 (to the extent that it depends from Claim 74) are not rendered unpatentable over Hirono for at least the reasons provided for Claim 74. Therefore, the 35 U.S.C. 103(a) rejection of section 6 of the Office Action should be withdrawn.



PAGE 24/29 * RCVD AT 10/26/2005 7:42:01 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:8013281707 * DURATION (mm-ss):09-32

BEST AVAILABLE COPY

Section 7 of the Office Action rejects Claims 77-80, 83 and 84 under 35 U.S.C. 103(a) as being unpatentable over United States patent number 6,320,874 issued to Crump et al. (hereinafter "Crump"). Claim 77 recites a communication method in a third communication apparatus of a first node located between a first communication apparatus of the first node and a second communication apparatus of a second node. Here, the first communication apparatus and the second communication apparatus perform data communication based on PPP. The method intermediates a notification of end request from the first communication apparatus to the second communication apparatus, produces an end identification packet, and transmits the produced end identification packet to the first communication apparatus.

In the previous response, we asserted that in Crump, both the data that the translating device 110 receives from the TCP device 118, and the data that the translating device 110 transmits to the TCP device 118 are the same TCP FIN message (see Figure 3), and therefore, it cannot be said that the translating device 110 receives a notification of end request from a first communication apparatus, and transmits an end identification packet to the first communication apparatus.

In the section 10 of the Office Action, regarding claims 77-84, the Office Action states that even if the same Fin message is used, the transmission device receives notification of an end request and transmits an end ID packet to the first communication apparatus. However, this opinion is clearly not correct. In PPP, a notification of end request and an end identification packet are clearly different from each other.

Therefore, Claim 77 is not rendered unpatentable over Crump. Further, in the present invention of claim 77, the first communication apparatus and the second communication apparatus perform data communication based on PPP. In Crump, there is no description



PAGE 25/29 * RCVD AT 10/26/2005 7:42:01 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:8013281707 * DURATION (mm-ss):09-32

BEST AVAILABLE COPY

regarding PPP. This further supports the argument that Claim 77 is not rendered unpatentable over Crump. Claims 78-80 depend, directly or indirectly, from Claim 77, and are thus not rendered unpatentable over Crump for at least the reasons provided for Claim 77.

Claim 83 recites a communication method in a third communication apparatus of a first node located between a first communication apparatus of the first node and a second communication apparatus of a second node. Here, the first communication apparatus and the second communication apparatus perform data communication based on PPP. The method intermediates a notification of end request from the second communication apparatus to the first communication apparatus, receives an end identification packet from the first communication apparatus, and terminates the end identification packet. Here, the third communication apparatus produces an end identification signal and transmits it to the second communication apparatus, when the third communication apparatus receives an end request packet from the first communication apparatus after intermediating a notification of end request from the second communication apparatus to the first communication apparatus.

In the previous response, we asserted that in Crump, the translating device 110 does not produce an end identification signal and transmits it. In the section 10 of the current office action, regarding claims 77-84, the examiner said that even if the same Fin message is used, the transmission device receives notification of an end request and transmits an end ID packet to the first communication apparatus. However, it seems that this is a responsive only to claims 77-80, and is not relevant to Claims 83-84. Therefore, the Office Action has not shown that Claim 83 is rendered unpatentable over Crump. Further, in Claim 83, the first communication apparatus and the second communication apparatus perform data communication based on PPP. In Crump, there is no description regarding PPP. Therefore, Claim 83 is not rendered unpatentable over

BEST AVAILABLE COPY

Crump. Claim 84 depends from Claim 83 and thus is not unpatentable over Crump for at least the reasons provided for Claim 83.

Furthermore, since Claims 71, 74, 77 and 83 are not anticipated nor rendered unpatentable over any of the cited art (either singly or in combination), Claim 86, which depends from each of these claims, is likewise not anticipated nor rendered unpatentable over any of the cited art (either singly or in combination).

Section 2 of the Office Action rejects Claims 57, 58, 61, 62 and 87 under 35 U.S.C. 103(a) as being unpatentable over Hamalainen in view of European patent application serial number 0942569 to Dravida (hereinafter "Dravida"). Claim 87 was added in the prior response, and Claims 57, 58, 61 and 62 are cancelled in this respect. Thus, the rejection remains only with respect to Claim 87. In the Office Action, Claim 87 is rejected by exactly the same reasoning for rejecting Claims 57-64 in the prior office action dated February 8, 2005 (see section 3 of the current Office Action and section 5 of the prior Office Action).

However, Hamalainen and Dravida do not disclose that the apparatus identifies one PPP frame in a lower layer than PPP, and converts first data into second data based on the identified one PPP frame as recited in Claim 87. Neither the current Office Action nor the prior Office Action points out which parts of Hamalainen and Dravida disclose this feature. The Applicants submit that this feature is not taught in either Hamalainen and Dravida. Therefore, Claim 87 is not rendered unpatentable over Hamalainen and Dravida. Thus, the 35 U.S.C. 103(a) rejection of section 2 of the Office Action should be withdrawn.

Claim 8 rejects Claim 85 under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Hamalainen. Claim 85 is cancelled in this response, thereby rendering this rejection moot.



PAGE 27/29 * RCVD AT 10/26/2005 7:42:01 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:8013281707 * DURATION (mm-ss):09-32

BEST AVAILABLE COPY

Claim 9 rejects Claim 88 under 35 U.S.C. 103(a) as being unpatentable over United States patent number 6,754,181 to Elliot et al. (hereinafter "Elliot"). Claim 88 recites the receipt of first data, the identification of one PPP frame in a lower layer than PPP, the conversion of the first data into second data based on the identified 1 PPP frame, and the transmission of the second data. Here, the first data is data having a PPP frame configuration, or a frame configuration flag-deleted from a PPP frame configuration, and being not octet-inserted and not bit-inserted, and the second data is data having a frame configuration of data link layer protocol other than PPP.

Elliott discloses general PPP, and therefore, it should be considered that data in PPP packets is octed-inserted or bit-inserted, and such PPP packets is converted into IP packets. Therefore, Elliott does not disclose a feature of the present invention of claim 88, i.e. converting the first data (data having a PPP frame configuration, or a frame configuration flag-deleted from a PPP frame configuration, and being not octet-inserted and not bit-inserted) into the second data (data having a frame configuration of data link layer protocol other than PPP). Thus, Claim 88 is not rendered unpatentable over Elliot.

New Claim 89 recites a mechanism that performs data conversion in a third communication apparatus (e.g. DCE 4, gateway 10 of the embodiment of the present application) located between a first communication apparatus (e.g. DTE 2) and a second communication apparatus (e.g. DTE 14) performing data communication with the first communication apparatus based on PPP. That is, communication of data being not octet-inserted (bit-inserted) is performed midway through a section in which communication based on PPP is performed. For example, communication of data being not octet-inserted (bit-inserted) is performed between DCE and NW of Figure 4 of the present application.



PAGE 28/29 * RCVD AT 10/26/2005 7:42:01 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:8013281707 * DURATION (mm-ss):09-32

BEST AVAILABLE COPY

This feature is not disclosed in any references cited in the current office action including Hamalainen and Dravida. Therefore, the present invention of claim 89 has novelty and non-obviousness over the cited references. The same thing can be said for claims 90-97 which depend on claim 89.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 26th day of October, 2005.

Respectfully submitted,

ADRIAN J. LEE
Registration No. 42,785
Attorney for Applicant
Customer No. 022913

AJL:ds
DS0000004189V001



PAGE 29/29 * RCVD AT 10/26/2005 7:42:01 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:8013281707 * DURATION (mm-ss):09-32